شارك الملايين
في الاستمتاع بتدخين
سجاير رُوثمان كِنج سايز فلتر

EXPLORATIONS

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Arabic Script

David Stansfield

> By the meaningless sign linked to the meaningless sound we have built the shape and meaning of Western man
>
> MARSHALL MCLUHAN

> 'May the nightingale forever sing at the bottom of your garden'
>
> (*Arabic for 'Yours sincerely'*)

It has been said of the phonetic alphabet that it 'makes a break between eye and ear, between semantic meaning and visual code' and 'reduces the use of all the senses at once, which is oral speech, to a merely visual order'; it is 'the translation or reduction of a complex, organic interplay of spaces into a single space'. The effects of all this have been:

> 'to translate man from the tribal to the civilized sphere' to 'land man at once in varying degrees of dualistic schizophrenia'
>
> to constitute 'not only Cartesian but Euclidean perceptions'
>
> to drive peoples 'in the direction of conquest and organization-at-a-distance'
>
> to be a 'processor of men for homogenized military life'
>
> to create ' "civilized men" – the separate individuals equal before a written code of law'
>
> to diminish 'the role of the other senses of sound and touch and taste'
>
> to break up 'every kind of experience into uniform units in order to produce faster action and change of form (applied knowledge) – the secret of Western power over man and nature alike'
>
> to endow men 'with the means of repressing their feelings and emotions when engaged in action. To act without reacting, without involvement.'

Now, practically none of these remarks applies to the Arabs. Most Arabs are tribal and not 'civilized'; they show no sign of the dualistic schizophrenia – head/heart, body/soul, mind/matter – that typifies modern Western man. They are not noted for their Cartesian or Euclidean perceptions. They have shown no talent for organization-at-a-distance (they once had a vast empire, but it began to disintegrate the moment it came into being). Homogenized military life is foreign to the Arabs, as is the idea of equality before a written code of law. The visual sense has not been played up in their culture at the expense of the senses of sound and touch and taste – quite the reverse in fact. They have not made much effort to apply their scientific knowledge to worldly ends. And they are certainly not known to be in the habit of repressing their feelings and emotions when engaged in action. And yet, on the face of it, their script is both phonetic and alphabetic, and very similar in many ways to Roman script, stemming as it does from a common ancestor. This is the ground for the figure which follows.

As can be seen in Fig. I, there are 29 Arabic letters. They are all consonants; there are no vowel-letters. The diacritics in the 'names of the letters' column indicate vowel inflection, but they are only used in the Koran and in children's books. All Arabic words are triliteral. The first word one learns in Arabic is kataba, this means 'he wrote'. All words referring to 'writing' in Arabic are derived from kataba. A writer is kātib, an office is maktab, a book is kitāb, and so on. This simplifies the problem of recognizing these words when they are written without vowel diacritics, but there may still be considerable complications. The ktb (without vowels) could actually be pronounced in dozens of different ways (happily many of them impossible grammatically): kataba, kutiba, katiba, kutubu, kitibu, kitiba, katuba, etc.

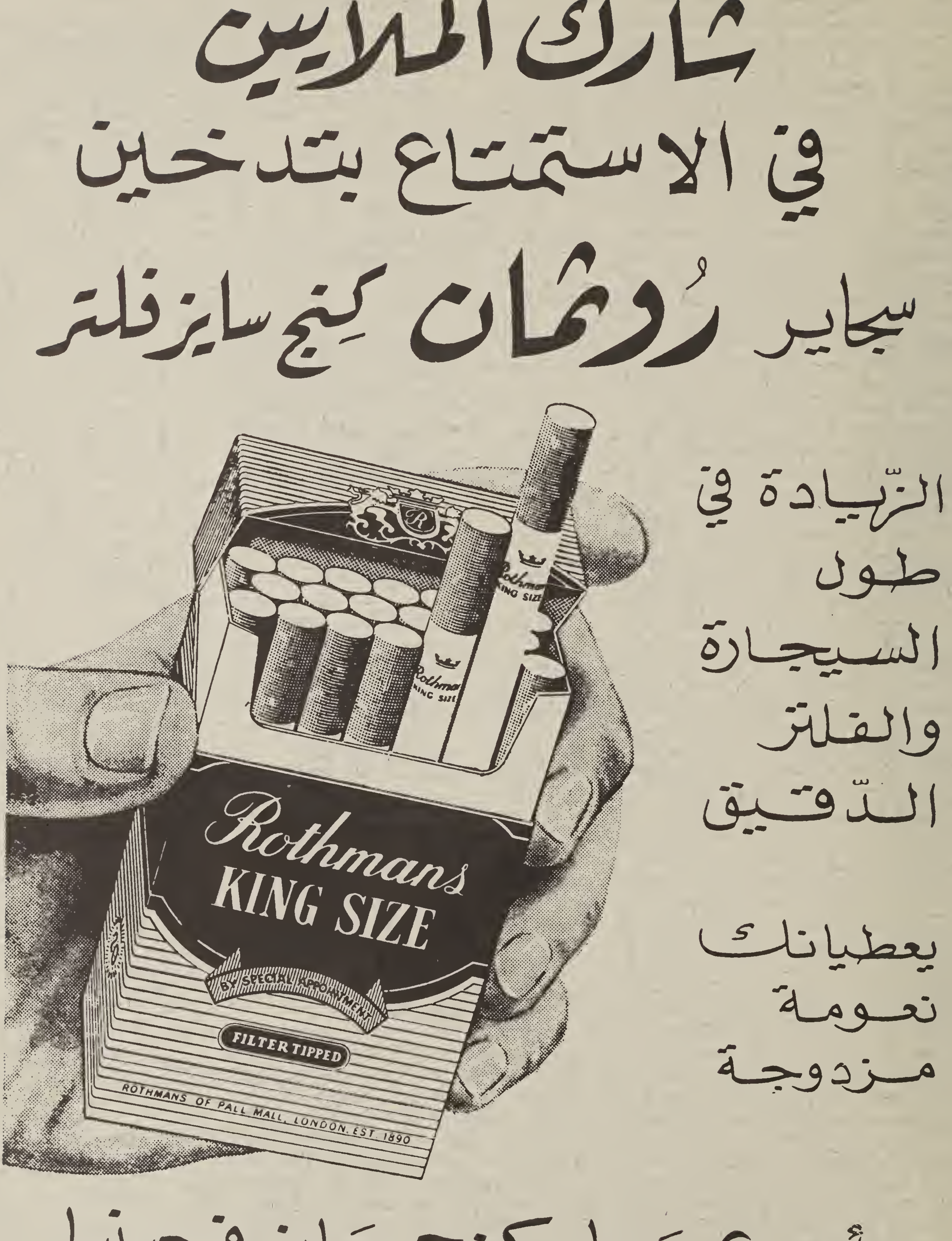
Because of the absence of vowels in Arabic, you have to *know* the word before you can read it. If you come across a word you don't know, either because it is esoteric or because it is a transliteration of a foreign word, it may be impossible to *read* it, let alone understand it. In Roman script, even if we don't know the meaning of a word, we have at least a reasonable chance of being able to pronounce it – and even if we can't pronounce it, we will almost certainly be able to 'read' it. But an unfamiliar word in Arabic may have no sound at all as far as the would-be reader who does not *know* it is concerned. And if it has no *sound*, in a sense it cannot exist for the Arab. Salih J. El-Toma[1] writes: 'it is often remarked that in Arabic one should understand in order to read correctly, as if reading were to come after understanding and not the other way round.' And in order to understand a word in Arabic, you have to be able to *hear* it.

But most Westerners, since the printing press anyway, have got into the habit of reading Roman script silently. They can in fact quite happily read a word without caring at all how it should be pronounced. This is why many undergraduates have difficulty reading their essays aloud. They have got used to reading and writing rather academic words such as 'dichotomy' or 'epistemic', but they have very little idea how to pronounce them. This possibility of mispronunciation may be peculiar to languages written in Roman script. It is virtually im-

Names of the letters	Isolated form	Form when joined to: Preceding letter	Form when joined to: Preceding and Succeeding letters	Form when joined to: Succeeding letter only	Transcription
أَلِفٌ ʾalif	ا	ﺎ	—	—	ā
بَاءٌ bāʾ	ب	ﺐ	ﺒ	ﺑ	b
تَاءٌ tāʾ	ت	ﺖ	ﺘ	ﺗ	t
ثَاءٌ t̲h̲āʾ	ث	ﺚ	ﺜ	ﺛ	t̲h̲
جِيمٌ jīm	ج	ﺞ	ﺠ	ﺟ	j
حَاءٌ ḥāʾ	ح	ﺢ	ﺤ	ﺣ	ḥ
خَاءٌ k̲h̲āʾ	خ	ﺦ	ﺨ	ﺧ	k̲h̲
دَالٌ dāl	د	ﺪ	—	—	d
ذَالٌ d̲h̲āl	ذ	ﺬ	—	—	d̲h̲
رَاءٌ rāʾ	ر	ﺮ	—	—	r
زَايٌ zāy	ز	ﺰ	—	—	z
سِينٌ sīn	س	ﺲ	ﺴ	ﺳ	s
شِينٌ s̲h̲īn	ش	ﺶ	ﺸ	ﺷ	s̲h̲

Names of the letters	Isolated form	Form when joined to: Preceding letter	Form when joined to: Preceding and Succeeding letters	Form when joined to: Succeeding letter only	Transcription
صَادٌ ṣād	ص	ﺺ	ﺼ	ﺻ	ṣ
ضَادٌ ḍād	ض	ﺾ	ﻀ	ﺿ	ḍ
طَاءٌ ṭāʾ	ط	ﻂ	ﻄ	ﻃ	ṭ
ظَاءٌ ẓāʾ	ظ	ﻆ	ﻈ	ﻇ	ẓ
عَيْنٌ ع ain	ع	ﻊ	ﻌ	ﻋ	ع
غَيْنٌ g̲h̲ain	غ	ﻎ	ﻐ	ﻏ	g̲h̲
فَاءٌ fāʾ	ف	ﻒ	ﻔ	ﻓ	f
قَافٌ qāf	ق	ﻖ	ﻘ	ﻗ	q
كَافٌ kāf	ك	ﻚ	ﻜ ﻜ	ﻛ ﻛ	k
لَامٌ lām	ل	ﻞ	ﻠ	ﻟ	l
مِيمٌ mīm	م	ﻢ	ﻤ ﻤ	ﻣ	m
نُونٌ nūn	ن	ﻦ	ﻨ	ﻧ	n
هَاءٌ hāʾ	ه	ﻪ	ﻬ ﻬ	ﻫ	h
وَاوٌ wāw	و	ﻮ	—	—	w (ū, aw, au)
يَاءٌ yāʾ	ى	ﻰ	ﻴ	ﻳ	y (ī, ay, ai)
هَمْزَةٌ hamza	ء	ﺄ	ﺌ	ﺋ	ʾ
	أُ إِ أَ	ؤ			

Fig. 1.



شارك الملايين

في الاستمتاع بتدخين

سجاير رُوثمان كِنج سايز فلتر

الزّيادة في
طول
السيجارة
والفلتر
الدّقيق

يعطيانك
نعومة
مزدوجة

أوسع سَجاير كِنج سايز فرجينيا
إنتشارا في العَالم

Rothmans
KING SIZE
BY SPECIAL APPOINTMENT
FILTER TIPPED
ROTHMANS OF PALL MALL, LONDON. EST. 1890
Rothmans KING SIZE

Fig. 2.

possible to mispronounce an Arabic word; for if you can't pronounce it, you can't read it at all. This means that it is very difficult to read Arabic silently; and almost impossible to read unfamiliar Arabic silently. There may be some Arab scholars who can read practically everything without vocalizing, but even they, when confronted with, say, a transliterated foreign word, will have to try to say it aloud before they can read it (see Fig. II: ROTHMAN'S KING SIZE FILTER). All of this happens simultaneously – or not at all – you speak (or sub-vocalize) the word and therefore hear it and therefore know it and therefore you can read it. And if you can't do *one* of these things you can't do *any* of them.

The Westerner experiences something comparable to this when he tries to read a handwritten letter in French or some other language which he knows quite well but which is not his mother tongue. Although he may have little difficulty in reading printed French without vocalizing, he will find it almost impossible to read the handwritten French without speaking it out loud. He will do this unconsciously in order to enlist the aid of as many oral cues as possible to make up for the visual clues that may be missing in the manuscript. *All* Arabic script, whether printed or handwritten, has the effect of manuscript. For not only are there no vowels but also there is no separation of the letters.

Most Arabs, if asked to read something in public will either have to go over the words first, marking in all the diacritics (standard practice for all Arab radio and TV announcers and newsreaders), or else they will have to have a little rehearsal and read the passage through *aloud* before they can be sure that they can read it all. Reading Arabic without diacritics becomes a question of throwing oneself in at the deep end since it is not possible to rehearse a passage silently. This has the weird effect of making the reader feel that he is 'giving himself up' to the written words; he is in their power to some extent and is not quite sure what is going to happen next – until he hears his own voice telling him. He cannot, for example, skip ahead of himself with his eyes to see what's coming round the next sentence. He must read one, or at most two or three, words at a time ('speed-reading' is impossible in Arabic). One further effect of this is that it becomes very difficult to be 'objective' about what one is reading. Not only because the sounds of the Arabic language have a very powerful effect in their own right (independently of their meaning), but also because the very act of reading Arabic script is so involving that one has not time or opportunity to reflect on the text or to distance oneself from it and weigh it up coolly and unemotionally.

Arabic is a Holy language: it must remain in form, grammar and meaning as close to the original as possible. And by 'the original' I mean the language in which God dictated the Holy Koran to Muḥammad, and the script – the *manu*script – in which Muḥammad and others wrote out God's words. As far as the Muslims know, Arabic is the *only* language God has ever spoken in. It is His Chosen Language. *The* Holy Language. The Grammarian Ibn Fāris[2] wrote: 'Arabic is the mother of all tongues, first taught to Adam in paradise. When he disobeyed God, he was deprived of this privilege and had to learn Syriac instead.' The Koran itself is a miracle, and the language in which it is written is miraculous and sacred. As Abū ʿUbaydah[3] wrote in the 9th century: 'Whoever pretends that there is in the Koran anything other than the Arabic language has made a serious charge against God. Since 633 A.D. when Muḥammad's followers finished writing out the Koran as it had been dictated to the Prophet by God, *no change* has been permissible in the written Arabic language. The spelling, the meaning of nearly all the words, the grammar – all were frozen at Medina in 633 A.D. Arabic is the only language in the world that came to a dead stop over 1300 years ago, and which has not moved one inch in any direction since. Some of the more amusing effects of this total linguistic denial of time and progress and change have been the frenzied efforts of Arab grammarians ever since the 7th century A.D. to rationalize what an unbeliever might call God's bad grammar. For, although Arabic, like all Semitic languages, is based on triliteral roots, God apparently forgot about this sometimes and used words with biliteral – or even quadriliteral – roots. He was also rather prone to using what we would call the accusative case when he should have used the dative or the ablative. With incredible ingenuity, Arab grammarians have been able to show that these were not mistakes at all and that there were perfectly logical reasons for writing triliteral words *as if* they were biliteral or quadriliteral, or that God's eccentric uses of the accusative were in fact justifiable because they carried certain subtle nuances that could not be expressed by the dative or the ablative.

But for a human being to make a mistake in writing Arabic is sacrilege; to read an Arabic word incorrectly is equivalent to farting in church. The knowledge of Arabic is religion itself. One Muslim tradition compares the writer of ḥadīth (prophetic tradition) who does not know grammar to a donkey carrying a nose-bag without barley in it. So Arabic, being the language of a revealed religion, could not die out as Latin did. It must exist as long as the Koran and Islam exist.

The Arabic script that Muhammad used was *manuscript*. Arabic handwriting is cursive, with many of the letters joined together in flowing and very beautiful patterns. This entails several different forms for most of the letters depending upon their position in the word, so that, although there are only 29 Arabic letters, most of them have four different forms (see Fig. I). This means that the beginner has to learn to read and write a total of 112 different 'letters' in effect. And the Arabic printing press requires up to 600 bits of movable type. This is because even printed Arabic must look as much like handwritten Arabic as possible. C. Mohammed Naim[4] has pointed out that 'we can confidently say that classical Arabic orthography and the orthographies derived from it, were most economical and efficient for the days when writing meant only calligraphy. In calligraphy it saved space and time if the orthography was cursive, if it discretely indicated all the consonantal contrasts with single graphemes but neglected some of the vowels which could be predicted, and if the letters were written in a non-linear fashion and were given smaller, special variants for that purpose. But these very qualities of an orthography become its worst shortcomings in these days of typewriter and printing.'

The Arabs resisted the printing press until the 19th century (Muhammad ʿAli introduced the first Muslim printing press in Egypt in 1822) partly because of these difficulties, but also partly because they have always felt that Arabic was *meant* to be written by hand as that was how the Koran was first set down. It was a matter of fact forbidden to print the Koran until recently (although seven years in paradise are assured to any Muslim who makes a handwritten copy). Philip K. Hitti[5] (writing in 1958) comments: 'Moslem conservatism as it related to the treatment of the word of God may have retarded the admission of the printing press; even today the Koran may be handwritten or lithographed but not printed.'

There have, over the last 30 or 40 years, been a number of proposals to 'reform' Arabic script, either by simplifying it, reducing the number of letter forms, or by printing each letter separately. There have even been suggestions that it should be scrapped altogether and replaced by Roman script. This last is of course out of the question for the Arab Muslim. But even the suggestions for simplification or separation of the printed letters are quite unacceptable because of the need to keep the appearance of print as close as possible to that of manuscript.

Attempts to create special letters for the vowels have also failed; partly because it was found that Arabs could not read an Arabic script that included both vowel and consonant letters. Most Arabs, although they can only read up to two or three words at a time, are virtually incapable of reading one letter at a time. This is to some extent because most of the letters are joined together, but mainly because the letters in an Arabic word form a *gestalt* which has more in common with a Chinese ideograph than with a series of discrete letters. Most Arabs see each word as a 'picture' (albeit an abstract one) of the thing or idea it represents. They tend to use written words as visual mnemonics, the form of which immediately conjures up a meaning without there being any question of 'spelling out' that meaning. Teachers of English to foreign students have remarked how prone Arabs are to take one glance at an English word and then on the basis of its general appearance make some wild guess as to what it is. An example of this told to me recently was the word *artichoke*, which Arab students invariably read as *article*, because it begins with the same letters and looks similar in outline. Arabs make this sort of mistake much more often than do Spanish or Russian or Polish students, not because they are handicapped by having a very different native script, but because they are simply not in the habit of looking closely at words and of reading them letter by letter or even syllable by syllable. When, therefore, various reformers suddenly inserted vowel-letters into Arabic words, they changed the whole appearance of the words to such an extent that they became completely unrecognizable. This, coupled with the fact that God managed to get along perfectly well without vowel-letters, has ensured that Arabic script will always remain purely consonantal.

Jack Goody[6] has pointed out that many non-Arab Muslims who use Arabic for religious purposes never actually learn to 'read' it at all. Instead they memorize one chapter (Surah) of the Koran at a time and then use the design made by the letters on the particular page of the Koran on which that Surah appears as a mnemonic or memory-jogger. (Many young children in the West have bluffed their way through nursery storybooks in the same way.) The blind Egyptian novelist, Ṭaha Ḥusain,[7] memorized the whole of the Koran (this was in the 1920s) when he was eleven and thereby automatically earned the title of 'Shaikh'. Unfortunately he forgot it again when he was twelve and promptly lost his Shaikh status. There is a Muslim saying that 'the book that has not been memorized is like wealth in the possession of others.'

With few exceptions, it is not permissible to use an old word in a new way. As E. Shouby[8] explains: 'No new word is acceptable in print to the majority of Arab readers unless it has been used in the writings of outstanding authorities.' What the Arabs have to do in order to write about modern technology and machines is to take over the European name for the object or technique in question. 'Lorry' becomes in Arabic *al-Lārī* (*al* = the); this is fair enough, but the plural of words of this form are what is called 'broken' in Arabic, which means that they usually acquire an additional syllable, so that 'lorries' becomes *al-Lārāwī*. This sort of thing makes life very difficult for Arabs – let alone foreigners – who have to read about the modern world in Arabic. The technical term may not always be taken from English either: in Jordan a sparking plug is *al-Sparkplug*, but in Lebanon (a former French colony) it is *al-Bouji*.

A page of Arabic writing can be, and often is expressly intended to be, an abstract design in its own right, with the meaning of the letters and words playing a very minor role. Many oriental carpets, brass trays, coffee pots, etc., are decorated in this way. The whole art of the *arabesque* (which strictly consists of writing only) and the convoluted geometrical designs which are so dear to the Arabs developed directly from their religion. Islam forbids the representation of the human – and animal – form. So the Arab craftsman and artist has to resort to intricate abstract forms. The typical carpet designs often look as if they could go on for ever, coming up with permutation after permutation of rosettes, diamonds, ovals and stylized plant shapes. This is no accident. Not only is the Muslim forbidden to play God by re-creating human beings or animals in paint or wool, he is also forbidden to play God by ever manufacturing something which has a beginning or an end. There must never be a conclusion to the design on his carpet or his inlaid cigarette box; only God can decide when something is finished.

Arabic script is not only Holy, it is also magic – or rather, it is both at once, since there is not the same split between magic and religion for the Arab as there is for the Westerner. Doutté, in *Magie et Religion dans 'Afrique du Nord'*,[9] explains how magic power (*vertu*) attributed to oral formulae was related to their meaning and ended by being attributed to the words themselves and to the sounds that made them up. Writing itself therefore comes to be reputed to have magical powers: 'the words of a single formula can be separated, aligned in series, distributed according to various geometric designs; in this way words belonging to different classes of ideas could be mixed. For example, the names of God, the names of angels, the names of demons, verses of the Qurʿān, are scattered in geometric figures, laid out in squares, broken down into letters; these letters, corresponding to numbers can be replaced by them ... The designs formed in this, mostly rectangular polygonal, are called *jadwal*, in Arabic "picture" '.

We say in English when someone says something offensive or boastful that we will make him 'eat his words'. In the Islamic world the Koran is still 'drunk' even today. Goody[10] writes: 'To wash the colour from off the writing surface and then swallow it down is to drink in, to internalize, a power which would otherwise remain external to the imbiber. ... In Egypt Lane ... claimed that the most approved method of curing disease was to write certain pages of the Qurʿān on the inner surface of an earthenware bowl, then to pour in some water, stir it until the writing is quite washed off, and, finally, "let the patient gulp down the water, to which the sacred words, with all their beneficent power, have been transferred." '

Partly because of the fact that the reader of Arabic must *hear* what he is reading, and partly because of the enormous stress placed on the sound of their language, Arabic script must be considered as 'oral' as a musical score, which has no meaning whatever until it is heard. In this respect, Arabic is the most *phonetic* script in the world. But, in spite of the absence of vowels and all the other differences between it and our Roman script, is it correct to call Arabic script *alphabetic*? I don't know. And the experts are divided: Bloomfield,[11] Driver,[12] Jensen[13] and Diringer[14] seem to imply that all scripts derived from the Phoenician are alphabetic, but I. J. Gelb makes a very strong case for limiting this characteristic to Graeco-Roman script and for defining Arabic script as *syllabic*. But it may be that this is not such an important question after all.

There is a whole world of difference between Arabs and Westerners that obviously cannot be explained away by a mere lack of vowels in a writing system. Nonetheless, as I hope I have demonstrated, such small mechanical details as these can have surprisingly far-reaching effects.

NOTES

1 'The Arabic Writing System and Proposals for its Reform', Salih J. el-Toma, *Middle East Journal*, Vol. 15, No. 4, Autumn 1961, p. 405.

2 Quoted in *History of the Arabs*, Philip K. Hitti, New York: Macmillan, 1958, pp. 452/3.

3 *Ibid*, pp. 452/3.

4 'Arabic Orthography and some Non-Semitic Languages', C. Mohammed Naim, *Islam and its Cultural Divergence* – Studies in Honor of Gustave E. von Grunebaum, ed. Girdhari L. Tikku, University of Illinois Press, 1971, p. 117.

5 Hitti, op.cit., p. 557.

6 *Literacy and Traditional Societies*, Jack Goody, Cambridge University Press, 1968.
7 *Al-Ayyām*, Ṭaha Ḥusain, Egypt, 1952.
8 'The Influence of the Arabic Language on the Psychology of the Arabs', E. Shouby, *Middle East Journal*, Vol. 5, No. 3, Summer 1951, p. 286.
9 *Magie et Religion dans l'Afrique du Nord*, Doutté, Algiers, 1909.
10 Goody, op.cit., pp. 230/1.
11 *The Hidden Dimension*, Edward T. Hall, New York: Doubleday, 1966, pp. 159/160.
12 *Language History*, Leonard Bloomfield, New York: Holt, Rinehard and Winston, 1933.
13 *Semitic Writing*, G. R. Driver, London: Oxford University Press, 1948.
14 *Sign, Symbol and Script*, Hans Jensen, London: Allen and Unwin, 1970.
15 *The Alphabet*, David Diringer, London: Hutchinson, 1968.
16 *A Study of Writing*, I. J. Gelb, University of Chicago Press, 1952.

The structure of the Story-Telling Event

J. R. Rayfield

> Newfie in bank to cash cheque. Asked for identification, he produced a pocket mirror. He looked into it intently, and said: 'Yup, that's me alright!'

In the present study I have taken for granted the primary function of story-telling – entertainment, and concentrated on its function as a tracer for the social structure of the community. First I must describe the community. It is a rural area about ten miles square, including a couple of hamlets, but consisting mainly of 100-acre farms arranged along the roads, so that the houses are about one-quarter of a mile apart. It is about fifty miles from the large city of Toronto, about ten miles from Milton (population 6,000), fifteen miles from Guelph (population 30,000) and twenty-six miles from Hamilton (population over 300,000). Public transportation to these places is very inadequate, but almost every family has at least one car.

There are two distinct but interacting social strata. The upper one consists of people who work in Toronto in business or one of the professions; some occupy houses with five or ten acres of land; most of those who occupy full-size 100-acre farms rent their land to the full-time farmers in the lower social stratum. The lower one, which is the subject of this paper, consists of farmers, most of whom also work in industry in one of the neighboring towns or at skilled trades, doing some farming in their spare time, with the substantial help of their wives and children. The few full-time farmers specialize in such activities as raising chickens in batches of 20,000, breeding pedigree cows, raising special breeds of pigs, etc., for the all-round family farm of the old-fashioned type is no longer visible in Ontario. The interaction between the strata consists in the renting of land for farming, mostly raising feed for cattle and pigs, and the performance of services by the farmers, such as snow-plowing, well-digging, house repairs, etc. The two classes also interact in local government, where their interests sometimes coincide, sometimes clash. Most members of the local government organizations are from the upper stratum. There is little ordinary socializing between members of the two strata: it is confined to casual meetings in local stores, etc.

Ethnically, the upper stratum consists

mostly of native born Canadians of British origin, and English expatriates, some of whom had already tried Australia and South Africa, where they had hoped to find, I think, something like the class system of pre-First-World-War England. The lower stratum consists mostly of descendants of the original settlers of the area, and first- and second-generation immigrants from England, solidly working-class. Few other ethnic groups are represented in the area. There are some Germans in both social strata, but they are only marginally involved in the recreational aspect of social life of the community.

From this point on, I shall use the term 'the community' to designate this lower stratum, and include myself within it, since I do not socialize with the upper stratum.

The members of the community are very busy people, and there is little of the purely sociable activity that occupies so much time in middle-class communities. Conversation, in the course of which stories are told, usually occurs during visits which are occasioned by work relationships, but which develop into social occasions. People are always borrowing and lending items of farm equipment, working for each other with special machinery, and employing each other's teen-age sons. Women sometimes accompany their husbands on these occasions, and there is a social get-together when the work is done. Purely social evenings are rare. Parties are given only on special occasions, Christmas and New Year, twenty-first birthdays, engagements and weddings, visits from overseas parents. However, it seems that the total amount of time spent in social conversation seems to be about as much as in a community where such conversation is the sole object of gatherings.

On any of these occasions we may observe conversations which include the telling of stories, both jokes and personal narrations, which demonstrate both the solidarity of the community and factions within it.

One of the things on which all members of the community are agreed is that the members of the upper stratum try to exploit us, and even though they may succeed in doing so, they make themselves ridiculous in our eyes. Here is an example:

Setting: Kitchen of Mr. and Mrs. R.

Time: Noon

Personnel: Mr. and Mrs. R., Mrs. P. and Mr. S.

Situation: Mr. S. has spent the morning helping Mr. R. with some farm work. Mrs. P. has been helping Mrs. R. make wild grape jelly. Mr. H. has invited Mr. S. for a drink. The women were about to prepare lunch for everybody, but Mr. S. refused lunch, saying his daughter would have his ready for him at home. But it soon becomes clear that the men are going to drink all afternoon. The women would like to feed them and get rid of them.

Story-telling situation: They have been discussing the recent escape and recapture of Smoky's pigs. Smoky, (that is not his real name; he is Dutch or German, nobody is sure, just as they are not sure what his real name is) all agree, is a sloppy farmer, his pigs are always getting out. Still it is difficult to make a living farming around here, you haven't time to keep repairing your fences, people shouldn't make such a fuss about escaped animals.

Mr. S. at this point tells a story about an incident a few years ago when he was pound keeper. Mrs. E., a member of the upper stratum, called him to complain about escaped pigs. She had managed to drive them into her barn. Mr. S. came to see them, and went to make enquiries about whom they belonged to. Mrs. E. called him again to say the pigs had broken some windows stored in her barn. Before he could stop her, she let the pigs out thus creating a hazard on the road. Mr. S. asked to speak to her husband, but she said he was too tired. 'I was tired, too,' remarked Mr. S., telling the story. 'What right has he to be tired sitting on his ass all day.' 'Oh, yes,' puts in Mrs. P., 'her and Ken. She gives him a cup of tea, puts the sugar in and stirs it for him.' Mr. R. says, 'I wish I had a wife like that.' Mrs. P. talks about the helplessness and laziness of husbands. Mr. S. does not get the chance to finish his story. He tells another one about the recapture of somebody else's escaped cows. This person was a member of the farming community, and the point of the story was that these matters are easily settled among farmers, who respect each other and know their jobs.

Thus in the same situation we see expressed the hostility of the farmers to the commuters, and also, within the farming community, the problem of how much wives should do for husbands. These themes are interconnected, the point being that rich commuters can afford to keep wives with nothing to do but minister to their comfort, while farmers' wives have no time for such luxuries, but also there is disagreement between the male and female members of the farming community about how much wive should do in the way of pampering husbands, and ridicule, tinged with envy, of more leisured wives.

Here is another example:

Situation: A twenty-first birthday party. The young people are dancing in one room, the parental generation conversing in another.

Story-telling situation: One guest has to have his teeth out. Several people tell anecdotes about experiences with dentists, all on the theme that dentists charge a lot, but don't really know their job. Mr. K. tells how he went to 'the nigger dentist at Acton, and he pulled the wrong tooth. He asked me which tooth was aching, and I told him, and he pulled the one next to it. When I got home I looked and saw he had pulled the wrong tooth, so I had to go back the next week, and he pulled the right one. I told him he had pulled the wrong tooth the first time, and he said, well, they was both bad.'

The hostess had interrupted to object to the term 'nigger.' She said, and others agreed, that he was the only dentist who didn't overcharge, and he did know his job. At the end of the story, Mrs. K. said, 'Of course, both teeth were bad, and he should have had both pulled at once.' Everybody laughed. Mrs. M. then contributed her 'dentist story.' She had had all her teeth extracted and false ones inserted at one sitting. Afterwards she went to dinner with her mother. The mother asked, 'Wasn't this the day you were supposed to have your teeth out?' 'Yes,' said Mrs. M. 'I did have them out.' 'And I had ate a good dinner,' says Mrs. M., telling her story, 'and she never knew anything had happened.'

This ended the conversation about dentists.

Quite a complex pattern of social relationships is involved here. First, there is the pre-eminent one we hard-working farmers are exploited by professionals who make us pay through the nose for their services to our mouths, though they are much less competent at their jobs than we are at ours. This represents the solidarity of the farming community against outsiders. There is a refinement of this, however. Being Black, the dentist is exempted from the hostility felt towards the professional class. This does not mean he is accepted as a member of our community. He would be ineligible anyway, on the grounds that he is a professional man and geographically outside the area. But his membership of a racial minority – he is the only Black for many miles around – in some way compensates for his membership in a higher social class. Mr. K. was jumped on for using the term 'nigger.' We may be only farmers, but we are not ignorant; he should know better than to hold outmoded prejudices and express them in obsolete terms. But there is another reason why the guests welcomed the opportunity to laugh at Mr. K. He is one of the few farmers who makes a good income by farming. He raises chickens in large batches under contract to a marketing company. This entails great risk and extremely hard work on the part of both him and his wife. He is richer than most of the other guests, but his life style is essentially the same as theirs. Recently he had a severe illness attributed to overwork, but refused to cut down his operations. In fact because of the economic structure of the chicken business, he could hardly have relaxed without giving up the business entirely, and this facing severe financial loss. His fellow-members of the community have mixed feelings about him. He is envied for his success and pitied for his failure to enjoy his success in conventional ways. Yet he really does enjoy work better than any form of recreation. This party was one of very few social gatherings he attended. So we feel he is different from us. In a way we would like to resemble him, in another way we would hate to. Also, he is extremely knowledgeable about his work and about farming in general. So we appreciated his telling a story which he thought demonstrated his knowledge as being superior to that of the dentist, while actually he revealed his stupidity at not realizing that both teeth were bad. That was one reason why we laughed. But there were others. All the dentist stories, including Mr. K's, (but excepting Mrs. M's) showed, even though this was never the point of the story, that we put off going to the dentist as long as possible, partly because we hate giving our hard-earned money to members of the professional class, but partly because we are scared of dental work. We acknowledge the former reason, but hide the latter one in our laughter.

And this brings us to the reason why Mrs. M's contribution ended the talk about dentists. She had isolated herself from the rest of us by boasting of her lack of fear of dentistry. This is the aspect of the immediate social situation. But it also represents an aspect of the background of social situation. Although her husband, like the other members of the community is a skilled manual worker and a farmer, she has a certain skill at managing money – she and her husband own several pieces of real estate – that makes her more economically secure than the others. So that although she is generally a member of the community which feels itself to be exploited by professional people, she is less vulnerable to such exploitation than the others. These two factors in the social position of Mrs. M. were enough to terminate the dental conversation.

The use of story-telling events as 'tracers' for delineating the social structure of a community and its connections with wider communities seems to me to be a very useful device. It reveals that a rather small sample of social situations and a rather narrow range of social behaviors provide a great deal of information about quite complex social structures. Observation of storytelling situations enables a careful observer to resolve many of the ambiguities prevailing in social relationships of rapidly changing communities.

Ecology of Science

George C. Haour

Shrill in the cities, more muted in the countryside, technology surrounds us. To what end? Technology's only apparent driving force is corporate money: more and more is to be produced and consumed. To this pervasion, the reaction ranges from indifference to tepid irritation and to hysteria. Somewhere along the line falls a new concern about effects, ecology.

In a few years, our perception of a belching smokestack has dramatically changed; 'pollution' has replaced 'prosperity'. The latter is still very much alive among African governments who would gladly welcome more pollution.

The conscious control of the effects of technology is not without precedents. During the wars of the Renaissance, extermination of the enemy was not the goal. Fighting only by fair weather and halting at dusk were relatively well respected rules. In nineteenth century Britain workers attempted in bloody riots to oppose the introduction of automatic looms. John Nef, in his *United States & Civilization*, tells us about the sixteenth century mathematician John Napier who claimed he had discovered the ultimate weapon and never disclosed anything about it. Much later Alfred Nobel thought for a while that dynamite was dreadful enough to make war impossible.

Electronics belongs to technology, electricity to science. Technology deals with the 'know-how,' science with the 'why'? Both are tightly intertwined but, as a rule, science comes after technology, as abstraction comes after the fact.

Science and technology 'amalgamerged' to engender the atomic bomb. For many, Alamogordo was, at the time, a brilliant confirmation of a theory; for a few it was mere horror because of its scale. In 1939 the German atomist Szilard wrote Joliot-Curie to suggest that no further paper on the fission of atoms be published. By then scientists were so much concerned about their discoveries that they envisaged to censor themselves, as Napier had done. World War II and the atom-bomb brought the scientific establishment to the uncomfortable exercise of being critic of itself.

To an admirer who was asking him how he made his discoveries, Newton replied: 'By always thinking unto them'. Newton is often taken as the archetype of The Man of Science. But, at the height of his creativity, he abandoned his work completely, as Rimbaud did with poetry. Scientists rarely follow this aspect of the model: they do not drop out to join the London mint or a Californian commune. Although the euphoria of the post-'Sputnik' era has long since passed, scientists are less malthusian than other establishments. Many are becoming 'technologists' to find remedies for the ills of their peers' activity.

Scientific research, heavily dependent on government money, is often judged too expansive. The feeling is still around that 'all this research has to do some good' but there is disenchantment in the air and NSF or NRC are a bit uneasy about their slice of budget.

Science deals with abstraction behind observable effects. It supposedly takes away from political involvement. Scientists have consistently been reluctant to run for office. Among the 'great pirates,' to whom B. Fuller refers, no science-man.

The East German government seems to be an exception, which includes so many mathematicians and computer men that a minister could say: 'Our country is not only ideologically sound but also is remarkably well programmed' ...

Charles Percy Snow recommends in his *Science & Government* that scientists should enter civil service at all levels because they would bring a much-needed 'gift of foresight'. Would many people agree with that? For Jacques Ellul, 'Scientists are incapable of any but the emptiest platitudes when they stray from their specialties'. This would hold true for any 'specialist', as 'philosophers' do not routinely contribute significantly to our knowledge of matter. In any case the public seems to be rather reassured by the theatrical skills of their governors with the 'specialists' in the prompter's box.

Like professors or physicians, scientists are more and more summoned to testify before the public. They have to confess a lot of ignorance. What are the long-range effects of DDT or SST? How about drugs and food additives? Whatever the answer, corporations keep using some two thousand preservatives, dyestuffs and other sweeteners, as long as it sells well ... None of them has yet adopted as motto: 'Our products are chemical-free'. A growing concern brings scientists to fight the use made of their work to destroy people and the outdoors. Because of the ecological wave, science is in the street more than ever: 'Scientists concerned on side effects of fluoride' (Ottawa Journal, Sept.) 'Hello Universe, do you read me?' (New-York Times, September 1971) 'M.I.T. staff members urging scientists to stop disclaiming responsibility for the effects of their work' (The Ottawa Citizen, September 7, 1971) 'Radiation matures brandy in fifteen days, Soviet says' (Globe & Mail).

A lot of news but little information. For the public, science remains, maybe not the 'holy cow' any more, but certainly a very esoteric area. An ignorance which fills some people with a superstitious awe at the idea of changing a fuse: malicious electrons!

Nonetheless science is a very open world: every piece of research is published in a torrent of literature. Secrecy does not belong to science but to technology, as attested by the existence of patents, industrial spying, etc. ...

The image of science among the public has had various fortunes. After the eighteenth century fad of the 'femmes Savantes', the bulletproof faith of the nineteenth century 'Ordem & Progresso', we are now prepared for catastrophies as much as we are for miracles.

Books in the vein of Tobias Dantzig's 'Number, Language of Science' explained how intertwined the scientific ideas are with our perceptual decor, and also with religion. In *Technological Society*, Jacques Ellul writes: (p. 423) 'The ecstatic phenomenon indicates nothing less than the subjection of mankind's new religious life to technique,' referring to Teilhard De Chardin.

Science and technology have brought specialization through mechanization, speed of communication and of travel. Major diseases remained unchecked but people live longer with higher standard of living.

Within one century, our ideas about atoms, light, electricity have been overthrown. A new mode of thought has appeared, with emphasis on quantitative measurement and functional relations.

Theories have been formulated, unifying knowledge but also generating ignorance. Continuum is out, quanta and waves are in. Our sense of space and time have been altered by, among other things, our recognition of non-euclidean space and the rapid movement of informations or persons.

What we see, hear, smell, taste or feel is, more or less directly, fashioned by science and technology. Some of these effects can be telescoped into the microworld of the supermarket:

The doors open automatically in front of The Customer, who takes a cart: physical effort reduced to a minimum. Bright lights and straight lines are in the image of the dry space of modern cities. 'Background music' is a 'white' noise akin to radio, television, tumult of traffic. Textures can not be felt, no smell. Everything is packaged, as the customer in his car, elevator or beehive's cell. Modern stores sacrifice liveliness and urbanity to sacrosanct efficiency; they are to the Kensington market what a moribund is to a child full of beans.

There is a wealth of scientific resources, untapped because they are judged non-economical. The governor of decision-making is 'profit' instead of 'effects'.

Karl Popper writes in *Conjectures and Refutations*: 'We are not students of some subject matter but students of problems': we need to be good students to become a more conscious society. Whether or not this is possible is not sure but it might be worthwhile trying.

During the course of the nineteenth century, human muscle has been disengaged from the productive process by the industrial revolution. Now, Norbert Wiener contends, the human nervous system is being disengaged by computers. The ecology of computers is certainly crucial for the future.

As in every age, we feel, between the industrial and electronic eras, the awkward effects of being between two ages... In *Steppenwolf*, Hermann Hesse writes:

'There are times when a whole generation is caught between two ages, two modes of life so that it loses all power to understand itself and has no standard, no security, no simple acquiescence.'

In other words, a shifting ground engenders new strains.

Prologue and Epilogue

an excerpt from The Open University: Access To What?

Gwendoline Pilkington

Prologue

The following discourse on the Open University concept is divided into two parts. Part One consists of a straightforward account of the what, why, where, who and how of the institution, treated more or less in that sequence. Part Two is a critique, not of the Open University per se, but rather as it constitutes one significant part of the total contemporary educational environment. It is, therefore, not the focal character in the discussion but merely one of the supporting 'cast.'

Of the many mind-expanding percepts which have been considered during the first term of our seminar on *Media and Society*, three seem to apply particularly to the educational field. First, is the relationship of 'figure' to 'ground' in any evolving society; second is the 'effects-before-cause' phenomenon; and third is the stubborn and blind resistance of individuals to recognize the effects of the phenomenal speed-up of change engendered by our electric age.

Implicit, but not necessarily stated, throughout the critique is the suggestion that much of the students' disenchantment with education (especially higher education), their subsequent apparent disorientation and alienation stems from being subjected to an academic system developed over a long period of time in and for an entirely different social milieu than the one into which the youth of today were born and nurtured. The traditionally constituted and static academic institutions or 'figures' are set on the contemporary and rapid shifting 'ground' of the age of automation – a contiguous situation as conducive to safe and harmonious interdependence as that of a skyscraper built on quicksand. The ill effects of such an unlikely combination have been cumulative over the past decade, manifesting themselves in such ways as student unrest on campuses and in steadily rising numbers of youngsters dropping and opting out of schools and universities. Suddenly, last fall literally thousands of students (almost ten thousand across Canada alone) spurned the opportunity either to continue to further studies beyond secondary school or to finish those already begun in university.

The effects had been in evidence for over a decade; now the cause was there for the academic planners to at last face with all its disturbing and demoralizing implications. Cries of who is guilty? who is the culprit? why weren't we warned?* have rebounded between university and government education officials, most of whom are still unwilling to admit that had they looked into the matter with their eyes open, or had they listened to what the 'wisemen' of their own age had been saying about the dysfunctional school system – its total anachronistic curriculum – its complete failure to put the students in real touch with their electric world – they might have avoided the unhappy circumstances now facing them. As Robert Pike pointed out in his study on accessibility to higher education, everyone has plunged ahead creating bigger and better traditional institutions for wider student populations without ever stopping to ask the most important question of all – access to what?

That is a question too painful for Western 'literate' man to ask because it would reveal an awful truth. The changes wrought by the incredible speed-up of every aspect of life in this electric age have made the accepted traditional academic environment obsolete. Not just in the sphere of education but on all fronts, mid-twentieth-century man, in his mounting insecurity, has found it easier to ignore the facts of the automation revolution than to face them squarely and do something about them.

If he continues to flounder in ignorance, to reject the statements of the prophets, especially with respect to continuing disharmonious and disjunctive educational policies, his civilization will crumble as surely as did others which could not 'respond' to the 'challenge' of their time.

Epilogue (An Excerpt)

The Open University is a fledgling institution, and the criticism which has been directed towards it in this paper has been harsh. It is conceivable that some, if not all, of it may prove to be unjustified. However, the following statement of Alfred North Whitehead on what a university is meant to be is submitted as a final argument against this particular approach to the accessibility issue in higher education.

> The universities are schools of education, and schools of research. But the primary reason for their existence is not to be found either in the mere knowledge conveyed to the students or in the mere opportunities for research afforded to the members of the faculty.
>
> Both these functions could be performed at a cheaper rate, apart from these very expensive institutions. Books are cheap, and the system of apprenticeship is well understood. So far as the mere imparting of information is concerned, no university has had any justification for existence since the popularization of printing in the fifteenth century. Yet the chief impetus to the foundations of universities came after that date, and in more recent times has even increased.
>
> The justification for a university is that it preserves the connexion between knowledge and the zest of life, by uniting the young and the old in the imaginative consideration of learning. The university imparts information, but it imparts it imaginatively. At least, this is the function which it should perform for society. A university which fails in this respect has no reason for existence. This atmosphere of excitement, arising from imaginative consideration, transforms knowledge. A fact is no longer a bare fact; it is invested with all its possibilities. It is no longer a burden on the memory; it is energising as the poet of our dreams, and as the architect of our purposes.
>
> Imagination is not to be divorced from the facts; it is a way of illuminating the facts. It works by eliciting the general principles which apply to the facts, as they exist, and then by an intellectual survey of alternative possibilities which are consistent with those principles. It enables men to construct an intellectual vision of a new world, and it preserves the zest of life by the suggestion of satisfying purposes.
>
> Youth is imaginative, and if the imagination be strengthened by discipline this energy of imagination can in great measure be preserved through life. The tragedy of the world is that those who are imaginative have but slight experience, and those who are experienced, have feeble imaginations. Fools act on imagination without knowledge; pedants act on knowledge without imagination. THE TASK OF A UNIVERSITY IS TO WELD TOGETHER IMAGINATION AND EXPERIENCE.

A. N. Whitehead, *The Aims of Education*. New York: The Macmillan Company, 1929.

If Whitehead is correct in his estimate of the *raison d'être* for a university then the Open University cannot qualify. An information or degree-granting dispensary it may well be, but a university it is not.

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*See Appendix for one newspaper report on the Canadian scene. For references to the British and American situation see *The Times Higher Education Supplement*, 'New Maps of Learning,' (10, 12, 71) p. 2, and "Sudden Standstill, Enrolment in California,' (19, 11, 71) p. 9.

The Intelligence Community and Figure/Ground Awareness

Robert W. Hoke

The electric age has removed the linear image lines which once appeared to detail causes and effects within a matrix of discrete systems. The electric age is forcing an awareness of real/now-time event matrices which are phased and arrayed through at least four dimensions each. The intelligence community, which finds itself at a leading edge of the realized technological environment, has achieved an awareness of electric age ambiance but has failed to adequately perceive the implications of the new reality set.

The intelligence community then has a special mission to perform over the next few years. A mission which may be unique, and which certainly is of a very special sort of importance. It is within the intelligence community that a comprehensive awareness and perceptual evolution can most readily take place. Because of the importance of the intelligence community in making political policy decisions, such an evolution could have a very beneficial impact. As might be imagined, the mere evolution is insufficient without an articulated awareness of the full impact range – including sources, targets, and effects.

Contemporary weapons systems and their capabilities are frequently out of phase either with political policies or the level of political understanding. At a very basic level, the average major weapons system has a development/deployment lead time of about eight years, which is generally more rapid than significant variations in political attitudes. The technology range of the electric age continues to add new environmental constructs before the impact of preceding constructs has been grasped. For example, the implications of nuclear weapons went misperceived by most senior planners (both in the East and the West), until the early 1960's, when events began to compel a change in attitudes. As recently as eight years ago, small military units, the size of several squads, were equipped with tactical nuclear weapons which were under the control of a very junior grade officer. Those weapons could have been used virtually at the discretion of the junior officer and generated an escalatory spiral which might have had no ending. Or, the example of the Strategic Bombing Survey conducted by the United States Air Force at the end of World War II. This survey examined in detail the real impact of large-scale bombing directed against industrial and non-military targets, and found that such bombing was almost invariably ineffectual. The implications of this study went ignored by the men who authorized, planned and conducted the various stages of Operation Rolling Thunder – the large scale, systematic bombing of North Viet Nam.

Weapons systems can be perceived as figures within the ground of political systems and their goals. They also remain figures within the ground of 'state of the art' technology. One task of the intelligence community is to detect and accurately assess what the systems capabilities of new weapons are, and what implications the new weapons have in the ground of a state's goals. On another level, the intelligence community deals with linear political intelligence; event figures on the policy ground. Simultaneously, a nation's foreign policies stand as figure on the ground of another state's policies, or the ground of several states. That all these relations are interrelated and simultaneous establishes a seldom perceived matrix of figure/ground relationships.

The already realized capabilities of the electric age have fabricated a non-linear, non-sequential environment, which is a matrix of many times and elements, before we have learned how to perceive what is there. The electric age has made technologies world-round, instantly available resources; the technologies are human possessions rather than national treasures. However, the beneficial impacts of the electric age are severely limited by traditional political constructs which have created and maintained arbitrary social and cultural demarcation lines. The traditional political constructs are out of phase with contemporary technologies and capabilities. And, it is these constructs which have generated and exacerbated real time problems with very high costs.

Ideally, in the electric age, the only significant limitation which should be operative in a given case is the state of the art of the relevant technology. Once that level has been established, analytical questions designed to shape the most efficient technological mix can be posed and dealt with.

Part of the systematic problem of time phasing is that there is no simple way to end the effects of historically useful mythologies and ideologies. Created to serve one end, within the ground of a certain technology, they outlive the dominant determinants of the ground and retard optimal utilization of the next phase capabilities of the electric environment. Rather than being perceived as 'tools' which quite normally would be abandoned with the advent of a superior (more efficient) technique, they are mythologized as truths which transcend both time and capability. Major ideologies such as Protestantism or Marxist-Leninist doctrines operate with half-lives measured in generations, while the problems and technologies related to them change much more rapidly.

Today, we are operating at one spatial 'point' along a continuum of all possible technological evolutions. It is characteristic of this point that systems capabilities have outrun the ability to dispense with mythologies and that the relationship of this point to the whole continuum remains largely invisible. It is, of course, a moving point ranging through 'n' dimensions, travelling in any 'direction'. As has been evidenced throughout machine-man history, understanding will lag behind literal capability, and will be disguised as rationalization linked to a fixed (or comparatively stable) set. Moreover, man will 'back' into an awareness of the existence of the continuum more or less unwittingly, as his linear world explodes and betrays the existence of the non-linear. The intelligence communities of the nations around the world are among the first formal groups to have this reality thrust upon them to be understood or ignored. The large, multinational corporation is facing many of the same awakenings, and has a stronger incentive to amend its perceptions and consequent behavior patterns, but it still must bow to the strictures of political comptrollers.

Editor's Note:

Mr. Ken Edey tells me that in all the years that the EXPLORATIONS series has appeared in the *Graduate* there has never been a response, pro or con, nor a comment of any sort.